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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,501	04/10/2006	Philippe Cathelin	91170-00019USPX	1199
23932 7590 05/21/2007 JENKENS & GILCHRIST, PC 1445 ROSS AVENUE SUITE 3200 DALLAS, TX 75202			EXAMINER CHEN, JUNPENG	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 05/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/531,501	Applicant(s) CATHELIN, PHILIPPE	
	Examiner Junpeng Chen	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-18 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-18 and 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to applicant's amendment/arguments filed on 02/16/2007. Claims 13-14 and 19-24 are cancelled by Applicant. Claim 31 is added. Currently, claims 1-12, 15-18 and 25-31 are pending.

### *Response to Arguments*

2. Applicant's arguments, filed on 02/16/2006, with respect to the rejection(s) of independent claim(s) 1, 9 and 25 have been fully considered and are persuasive.

Therefore, Prior Art rejection regarding claims 1, 9 and 25 in Office Action dated 10/30/2006 has been withdrawn.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-12, 15-18 and 25-31** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1** recites the limitation "the reference frequency" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Consider **claim 1**, it recites a limitation "the first reference frequency of the main loop is c) removed by a whole integer multiple of the transmit or receive frequency spacing the reference frequency from the cut-off frequency of the main loop". However,

according to paragraph [0059] of the specification of present application, "it (the first reference frequency) is removed by a whole multiple of the transmit or receive frequency, by at least the cut-off frequency of the main loop". Thus, it is unclear how the first reference frequency is being removed. Furthermore, it is unclear how the first reference frequency is "removed by a whole multiple of the 'transmit or receive frequency'".

Therefore, **claims 1-8** have not been examined in the merits. Applicants are required to either amend or cancel present claims 1-8 or are required to provide detailed clarification to above confusions.

**Claim 9** recites the limitation "the local oscillator signal" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Consider **Claim 9**, it recites the limitation "if a frequency of the local oscillator signal were reduced to a frequency of the second reference signal". However, according to paragraph [0062] of the specification of present application, it is "the reference frequency of the auxiliary loop is equal to the frequency spacing of the channels, reduced to the reference frequency of the main loop". Thus, it is unclear what is reduced to a frequency of the second reference signal (reference frequency of the main loop).

Therefore, **claims 9-12, 15-18 and 31** have not been examined in the merits. Applicants are required to either amend or cancel present claims 9-12, 15-18 and 31 or are required to provide detailed clarification to above confusion.

**Claim 25** recites the limitation "the reference frequency" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Consider **claim 25**, it recites a limitation "the first reference frequency is removed by a whole integer multiple of the frequency for radio frequency signal spacing the reference frequency from the cut-off frequency of the main loop". However, according to paragraph [0059] of the specification of present application, "it (the first reference frequency) is removed by a whole multiple of the transmit or receive frequency, by at least the cut-off frequency of the main loop". Thus, it is unclear how the first reference frequency is being removed. Furthermore, it is unclear how the first reference frequency is "removed by a whole multiple of the 'transmit or receive frequency'".

Therefore, **claims 25-30** have not been examined in the merits. Applicants are required to either amend or cancel present claims 1-8 or are required to provide detailed clarification to above confusions.

### ***Conclusion***

4. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Art Unit: 2618

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junpeng Chen whose telephone number is (571) 270-1112. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Junpeng Chen  
J.C./jc

EDAN ORGAD  
PRIMARY PATENT EXAMINER

*Edan Orgad* 5/14/07